Special Topics in Political Science: Experiments in Social Change (POL 179)[1]
UC Davis
Department of Political Science
Fall 2021

M/W 10-11:20am
Wellman Hall 230

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I. COURSE SUMMARY

How can we change the world for the better? We may want to save water, reduce police abuse, reduce transmission of infectious disease, or enable small businesses to grow. At the center of many decisions that shape these outcomes are government institutions responsible for policies like food stamps, police reform, Medicaid, and small business loans. Also important are citizens who act to ensure the right policy changes are made through voting, volunteering, and protesting. Political science is the study of both of these: institutions and political behaviors.

In this course, we will learn about a set of important social problems from prejudice to police abuse to fake news. We will learn about ideas from political science on how to address them.

We will not just focus on these ideas, but how we would know if they work. We will explore how randomized control trials, also known as A/B tests and randomized experiments, can be used to test these ideas. In medicine, our society requires a high standard of evidence for therapies: randomized-control trials, in which even the doctors don't know which patients are getting the medicine or a sugar pill. Increasingly, this kind of evidence is being demanded for the many other decisions governments make that affect the lives, health, and wellbeing of their citizens. Indeed, the 2019 Nobel Prize in Economic Sciences was awarded to three researchers for introducing randomized trials from medicine into economics. The same "causal revolution" has happened in political science.

You will come away able to read a paper reporting on a randomized trial and evaluate the quality of its evidence — what you learn from it, and what you can't. And you'll learn how to assess what the state of the art is on a topic where randomized trials have been conducted.

The skills you gain in this class will be relevant if you might want to work in government or for a political campaign. But they will also be relevant for working in medicine, data science at a tech company where A/B tests are a key tool, in journalism where data science methods are increasingly common, in nonprofits who want to learn how to do their work more effectively, and many other

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[1] This syllabus draws on courses and policies by Graeme Blair, Jessica Calarco, Erin Hartman, and Andrew Heiss.

fields. Although we will only study politics in other countries, you will see that many of the lessons we learn will be directly relevant to understanding efforts to bring about social change here in the U.S.

II. LEARNING OBJECTIVES

By the end of the course, students should be able to:

- Describe what a randomized trial is and what we can learn with the tool
- Read and critically evaluate evidence related to causal relationships
- Use R to analyze data from a randomized trial
- Conduct a small-scale randomized trial

III. ASSIGNMENTS

In this class you will learn by doing. There is increasing evidence that listening to and watching lectures is not an effective way for many students to learn. Our sessions together will be a mix of lecture on key concepts, and exercises in R that you will do with a partner and the support of the professor and TA during class. You will also do problem sets where you will practice the skills to analyze experiments on your own outside of class. For your final assignment you will run and analyze an online experiment with a group of classmates.

Along the way, we will learn about experiments that have been done to address issues around police violence, fake news, prejudice, infectious disease, and more. For each experiment, you will read, watch, or listen to a mix of policy briefs, podcasts, news articles, scientific articles, and videos that explain the context and policy goal that motivated the experiment.

IV. GRADING

1. Engagement with videos, readings, and podcasts (25%). You will engage with assigned material (readings and sometimes podcasts) before each class on Perusall. Perusall gives you the chance to learn together, and gives me the chance to identify common questions and then address them in comments or in class. Your grade is based on (1) watching, listening, and reading; (2) posting questions; and (3) responding to your classmates' questions. You can access Perusall for free through Canvas.

2. In-class exercises (20%). The in-class exercises will give you the chance to build your data analysis skills in an environment where you can collaborate and get support from your TA and professor. These assignments are due by the end of each class day on Canvas. We'll drop your two lowest scores when calculating your final grade.

3. Problem sets (30%). The in-class exercises give you the chance to practice new material with support from your professor and TA. The problem sets reinforce the lessons by letting you practice the same material without help from your instructors.

4. Final online experiment (25%). Your final project will be to design, run, and analyze an online experiment. Half of your grade for the final experiment will be based on preliminary planning exercises that you'll do with your group, and half will be based on the final writeup. You will be evaluated both by the teaching team and a peer evaluation.

Problem sets and the online experiment writeup can be turned in late if necessary. Late assignments will be marked off one partial letter grade (ex. B to B-) every 24 hours.

Overall, we have tried to design this course so that everyone can succeed. If you engage with the assigned material, participate in the Perusall discussions, complete the team assignments, and spend time on the take-home assignments like the problem sets and final experiment, then you are likely to do well in the class. We have designed the grading so that if you participate and make an effort, you will do well. **If you get behind, get in touch with me or your TA right away.** You might be surprised by how understanding we are of the difficult circumstances that COVID has put us all in. If you tell me or your TA that you're having trouble, we will not judge you or think less of you. I hope you'll extend us the same courtesy.

We hope there will be no reason to contest a grade. If you strongly feel that your grade on an assignment does not reflect the quality of your work, you may appeal through the following process: Write a memo that explains, in as much detail as possible, why you think you should have received a different grade. Give the memo to your TA, along with your graded assignment and a letter in which you formally request a re-grade. If you and your TA cannot reach agreement on your grade, your TA will pass the materials to another member of the teaching staff who will reevaluate the work and assign a new grade, which may be higher, lower, or identical to the one you originally received. This new grade will be final.

V. GETTING HELP

We encourage you to take advantage early and often of three resources: your TA's office hours, my office hours, and the Perusall discussion board. We are here to help, and want everyone to succeed in the course — and we think everyone can!

Please find a time within the first three weeks to meet with me or your TA about how the course is going and how we can help you succeed.

The Perusall discussion board allows all students to benefit from the discussion and to help each other understand the materials. Both students and instructors are encouraged to participate in discussions and answer questions that are posted. You should operate on the principle "if I have a question, everyone probably does too."

In addition, these university resources might be helpful:

- Writing assistance: https://tutoring.ucdavis.edu/writing
- Student health and counseling services: https://shcs.ucdavis.edu/
- Student disability center: https://sdc.ucdavis.edu/students

VI. COURSE POLICIES

As a UC Davis student, you have committed to following the university's code of academic conduct: https://ossja.ucdavis.edu/code-academic-conduct. You should not pass off others' work, words, or code as your own. You can avoid this by liberally citing and when relevant including quotation marks or notes indicating what is directly taken from others.

During team activities and problem sets, we encourage you to work with other students. These activities tend to work best when you find a stable team of 2-4 students and stick with that group, though you're not required to work with the same people every time. Each team member needs to turn in their own work, and you should not share your work with people who didn't do the work with you.

This course is taking place during an ongoing pandemic. We are all responsible for keeping each other safe, and for accommodating problems that might arise for us individually or collectively during the quarter. The university's COVID-19 policies for students can be found here: https://campusready.ucdavis.edu/students-and-families. We expect everyone in class to comply with the policies posted by the university and relevant public health authorities, including (as of September 2021), indoor masking, testing, reporting, and staying home if you are not okayed by the Daily Symptom Survey. This is an in-person class (i.e., lectures will not be recorded) but if you need to miss class we will work with you so that you can complete the assignments.

VII. BOOKS AND PROGRAMS

Readings and other course materials will be posted to Perusall, which you can access through the course Canvas page. The lectures will also draw on material in a few books on field experiments and data science. These books are recommended if you enjoy the course but are not required:

1. Rachel Glennerster and Kudzai Takavarasha. 2013. Running randomized evaluations: A practical guide. Princeton UP.
2. Alan Gerber and Donald Green. 2012. Field experiments: Design, analysis, and interpretation. W.W. Norton & Co.
3. Jake Bowers, Maarten Voors, and Nahomi Ichino. 2021. The theory and practice of field experiments: An introduction from the EGAP Learning Days.
4. Hadley Wickham and Garrett Grolemund. 2017. R for Data Science.

We will design and analyze experiments using the open-source statistical software R. You will receive instructions for how to download and install R. If you run into problems, we have set aside time after the first class session or in office hours to help you get it installed.

VIII. LECTURES AND READINGS

1. Students are expected to attend class sessions. The lecture portion of the class will include material *in addition* to what is covered in the readings. Most importantly, we will do the in-class team activities together in R that will teach you how to do your problem sets and final assignment.

2. Although the class will be larger than a seminar, participation in class is *encouraged*. There will be regular opportunities for students to ask questions, answer questions, and make arguments drawing on the material you have read. Please be prepared to participate.

Session 1 (Sep 22)

Before class:
- Try to set up R and RStudio following these instructions. If you have trouble, we will help you in class!
- Fill out the course survey due Sep 27

Week 1: Getting started

Learning goals:
- How to open RStudio, load and view data
- What is a causal question? What are potential outcomes? How can we use randomized trials to learn answers to causal questions?

Session 2 (Sep 27)

- Read: Gerber & Green. 2012. FEDAI. Chapter 1. *(20pp)*
- Read: *R 4 Data Science*. Chapter 4: Workflow basics. *(3pp)*
- Fill out course survey

Session 3 (Sep 29)

- Read: *R 4 Data Science*. Chapter 3: Data visualization.
- Set up R and RStudio following these instructions (if you haven't already)

Week 2: Reducing prejudice

Learning goals:
- How to read an experimental paper
- What is intergroup prejudice? How can we reduce it?

Session 4 (Oct 4)

- Read: Iraqi Christians Face an Impossible Choice (Atlantic)
- Read: Salma Mousa. "Building social cohesion between Christians and Muslims through soccer in Post-ISIS Iraq." *Science* 369(6505): 866-870. *(5pp)*

Session 5 (Oct 6)
Before class:
- Podcast: Scope Conditions podcast on Mousa paper
- Read: *R 4 Data Science*. Chapter 5: Data transformation. *(24pp)*

Week 3: Police reform

Learning goals:
- Understand the "theory of change" of community policing
- Visualize data from an experiment
- Understand how we can learn "what works for whom"

Session 6 (Oct 11)

- Read: Blair, Karim & Morse (2016) policy brief (14 pp)

Session 7 (Oct 13)

- Read: Use of Force Project (the evidence base for 8 can't wait)
- Read: Vox on 8 can't wait
- Listen: Philadelphia foot patrol experiment

Week 4: Improving health systems

Learning goals:
- Understand community monitoring in health systems
- Understand nonfinancial awards in health systems
- Learn about how to estimate uncertainty in our estimates of the average treatment effect

Session 8 (Oct 18)

- Read: Health care communities can count on (JPAL Briefcase) *(4pp)*
- Watch: Ebola in a war zone (Nature)
- Read: Editorial: Trust in Health Care in the Time of COVID-19 (JAMA) *(2pp)*
- Watch: Health care workers express overwhelming fatigue as COVID-19 cases surge across the country (CBS News)

Session 9 (Oct 20)

- Gerber & Green. 2012. Chapter 3: Sampling distributions, statistical inference, and hypothesis testing, pp51-66. (Stop after section 3.4). *[17pp]*

PROBLEM SET 1 DUE FRI OCT 22 AT 11:59PM

Week 5: Slowing the spread of fake news

Learning goals:
- Understand how misinformation can affect politics
- Understand the causes of misinformation and what we can do about them
- How to select outcome measures for experiments

Session 10 (Oct 25)

- Read: Indian Misinformation Will Decide World's Largest Election (The Atlantic)
- Watch: Fighting Misinformation on Social Media | Mohsen Mosleh (TEDx)
- Read: India's Democracy is the World's Problem (The Atlantic)

Session 11 (Oct 27)

- Sumitra Badrinathan. 2021. "Educative Interventions to Combat Misinformation: Evidence From a Field Experiment in India." American Political Science Review.
- Discussion Prompt: Interview a classmate about course evaluations. Post a summary in response to the discussion prompt on Canvas.

Week 6: Citizen action to improve governance

Learning goals:
- Learn common ways of randomizing a policy treatment
- Understand how different types of "nudges" work

Session 12 (Nov 1)

- Read: Graeme Blair, Rebecca Littman, and Elizabeth Levy Paluck. 2019. "Motivating the adoption of new community-minded behaviors: An empirical test in Nigeria." *Science Advances*.

Session 13 (Nov 3)

- Read: Sunstein, Cass. 2014. Nudging: A Very Short Guide.
- Listen: Nudge, Nudge, Nobel : Planet Money (Thaler interview)
- Read: Why should I fill out my course evaluations? Stanford Academic Advising.
- Read: Do course evaluations matter? Vanderbilt Hustler.

PROBLEM SET 2 DUE FRI NOV 5 AT 11:59PM

Week 7: Government censorship

Learning goals:
- Understand sample size and statistical power
- Be able to run a power calculation

Session 14 (Nov 8)

- Read: Gary King, Jennifer Pan, and Margaret E. Roberts. 2014. "Reverse-engineering censorship in China: Randomized experimentation and participant observation." *Science*.
- Listen: Censored: Molly Roberts on how China uses deterrence, distraction, and dilution to control its internet (Sinica Podcast)

Session 15 (Nov 10)

- Read: The Saudi Government's Global Campaign to Silence Its Critics (New Yorker)

Week 8: Inclusive governance

Learning goals:
- Understand how attrition and noncompliance affect what we can learn from experiments

Session 16 (Nov 15)

- Read: Understanding why people contest elections (Live Mint)
- Read: Saad Gulzar and Muhammed Yasir Khan, "Social Motivation, Political Candidacy, and Performance: Experimental Evidence from Pakistan." Working paper, pp1-14 (Sections 1-3)

Session 17 (Nov 17)

- Read: Saad Gulzar and Muhammed Yasir Khan, "Social Motivation, Political Candidacy, and Performance: Experimental Evidence from Pakistan." Working paper, pp15-34 (Sections 4-end)

PROBLEM SET 3 DUE FRI NOV 19 AT 11:59PM

Week 9-10: Returning to prejudice reduction

Learning goals:
- Understanding how the cases you choose to experiment in shape what you can (and cannot) learn from them
- How to read and interpret a meta-analysis or evidence review

Session 18 (Nov 22)

- Read: Elizabeth Levy Paluck, Seth A. Green, and Donald P. Green. 2017. "The contact hypothesis revisited." *Behavioural Public Policy*.

NO CLASS NOV 24 – THANKSGIVING

Session 19 (Nov 29)

- Listen: Policymaking Is Not a Science (Yet) (Freakonomics)

EXPERIMENT PRE-ANALYSIS PLAN DUE WEDS DEC 1 AT 11:59PM

FINAL EXPERIMENT WRITE-UP DUE WEDS DEC 8 AT 11:59PM